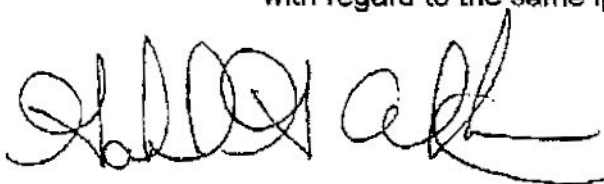


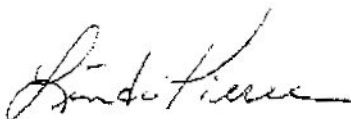
these sockets are poured sockets and not swaged fittings.

Refer to my Attachment 4 for the Spelter Exhibit. My Attachment 3 from United States Steel shows the Spelter socket and its attachment process which has nothing to do with this case as it is not a swaged fitting and the loading and stresses are not the same between the two attachment types.

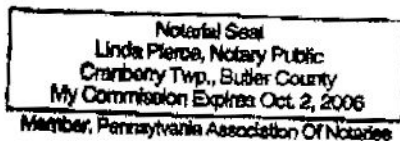
35. I did have at the time of my investigation a Wire Rope Sling Users Manual and a Wire Rope Users Manual with both publications authored by the Wire Rope Technical Board which is the industry association for the wire rope industry. Thus even though I did not have the manual produced by Hanes, assuming one exists, I had the wire rope industries equivalent with regard to the same information.



Gabriel G. Alexander P.E.



Notarized by:



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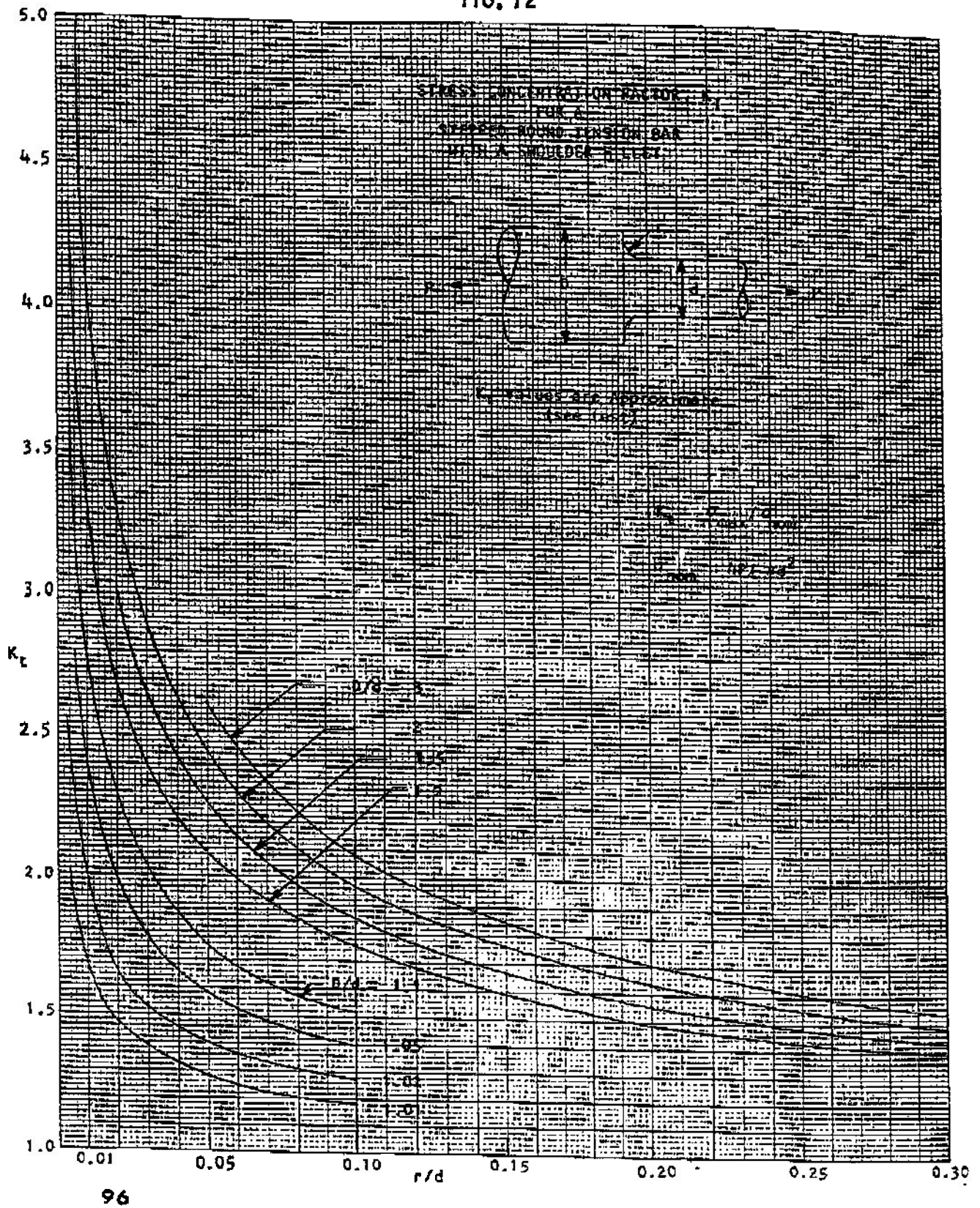
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**ATTACHMENT
I. A**

FIG. 72



ATTACHMENT
1. B

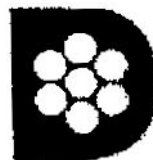


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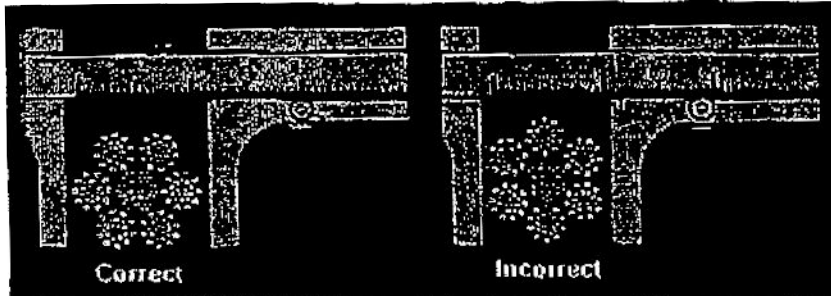
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**ATTACHMENT
2. A**



Measuring Rope Diameter

The correct diameter of a wire rope is the diameter of a circumscribed circle that will enclose all the strands. It's the largest cross-sectional measurement. You should make the measurement carefully with calipers.



Wire rope is normally made slightly larger than its catalog (or nominal) size. The following chart lists the size tolerances of wire rope.

Wire Rope Size	Tolerance
0 - 1/8"	-0 +8%
Over 1/8" - 3/16"	-0 +7%
Over 3/16" - 5/16"	-0 +6%
Over 5/16"	-0 +5%

Design Factors

The design factor is defined as the ratio of the minimum breaking force of a wire rope to the total load it is expected to carry.

Use of design factors provides rope installations with reasonable assurance of adequate capacity for the work to be done throughout a rope's service life. Considerations in establishing design factors include the type of service (operating speed, rough treatment, sudden loading changes, for example), design of equipment and consequences of failure.

In most applications, the selection of a rope based on the proper design factor has been made by the equipment manufacturer. In an application where a different rope is to be used, or in a new application, check government and industry regulations for the required design factor. Different rope types on the same application may have different design factor requirements.

Standards and regulations require that design factors be applied to the rope's minimum breaking force to determine the maximum working load. To determine the maximum working load for which an operating rope may be used, divide the rope's minimum breaking force by the required design factor. This is the rope's maximum working load. There may be other limiting factors in an application that make the maximum load the equipment can handle less than the rope's

ATTACHMENT

2. B